

Amendments to the Claims

Please amend this application, without prejudice as follows:

1. (Withdrawn)
2. (Withdrawn)
3. (Previously presented) An apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame;
 - b. a clamping mechanism connected to the frame for securing a golf club; and
 - c. a force mechanism connected to the frame, including:
 - i. a hydraulic piston,
 - ii. a one piece hollow shaft having an open end and a closed end, the closed end connected to the distal end of the piston,
 - iii. a spring having a first end and a second end, the spring residing within the hollow shaft with the first end abutting the closed end of the hollow shaft, and
 - iv. a turret having a smaller diameter portion and a larger diameter portion, the smaller diameter portion inserted in the open end of the hollow shaft and abutting the second end of the spring, the larger diameter portion being external to the shaft and having a slot designed to engage the shaft of the golf club while abutting the head of the golf club.


4. (Currently amended) An apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame including a block having a bore therethrough;
 - b. a hydraulic piston mounted on the frame;
 - c. a clamping mechanism connected to the frame for securing the golf club;
 - d. a one piece ~~hallow~~ hollow shaft extending from the piston and slidably resident within the bore;
 - e. a spring residing within the hollow shaft; and
 - f. a turret in removable communication with the hollow shaft via the spring, the turret engaging the head of the golf club for transferring a force stored in the spring and created by the piston to the head of the golf club.
5. (Original) The apparatus of claim 4 comprising an alignment spring for resisting axial movement of the shaft in response to the force created by the piston.
6. (Original) The apparatus of claim 4 wherein the turret is coaxially rotatable relative to the shaft to position slots of differing size in engaging alignment with the shaft of the golf club to bear against the head of the golf club.
7. (Original) The apparatus of claim 4 wherein the turret partially resides slidably within the hollow shaft and includes a plurality of open slots

around the periphery thereof for receiving golf club shafts of differing diameters.

8. (Original) The apparatus of claim 6 further comprising an alignment spring connected to the shaft and the frame for resisting axial movement of the shaft in response to the force created by the piston.
9. (Original) The apparatus of claim 4 wherein the clamping mechanism is manually actuable.
10. (Original) The apparatus of claim 4 wherein the piston is manually actuable.
11. (Original) The apparatus of claim 4 wherein the clamping mechanism includes a manually actuable crew for adjusting the magnitude of securing force to a golf club.
12. (Original) The apparatus of claim 4 wherein the piston includes a piston handle pivotally movable with respect to the remainder of the piston in a horizontal plane, the horizontal plane being within the longitudinal extremities of the frame.
13. (Currently Amended) Apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame;
 - b. a clamp connected to the frame for securing the shaft of a golf club against longitudinal movement; and

- c. means connected to the frame for applying force longitudinally to the head of the golf club in a direction to separate the head from the shaft, including:
- i. a hydraulic piston,
 - ii. a machine shaft having one end connected to the piston,
 - iii. a mushroom-shaped turret having a smaller diameter portion and a larger diameter portion, the smaller diameter portion being connected to a second end of said machine shaft, the larger diameter portion having at least one slot formed therein to slidably engage the machine shaft and thereby abut the head of the golf club, for transferring longitudinally directed force received from said piston via said machine shaft to said golf club head.

14. (Previously presented) Apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame;
 - b. a clamping mechanism connected to the frame for securing a golf club; and
 - c. a force generating and applying mechanism connected to the frame, including:
 - i. a manually powered pumpable hydraulic piston cylinder combination,
 - ii. a machine shaft having a first end connected to the piston,

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- iii. resilient means connected to the machine shaft for limiting shaft and turret longitudinal travel once said golf club head has loosened from said golf club shaft;
 - iv. a turret having a smaller diameter portion and a larger diameter portion, the smaller diameter portion being axially aligned with said machine shaft and parallel with said golf club shaft, for receiving axially oriented force generated by said piston-cylinder combination from said machine shaft, the larger diameter portion having at least one radially outwardly opening for slidably engaging the golf club shaft and abutting the head of the golf club to apply axially directed force thereto in a direction to separate said golf club head from said golf club shaft.

15. (Previously presented) Apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame including a block having a bore therethrough;
 - b. a manually operable hydraulic piston connected to the frame;
 - c. a clamp connected to the frame for restraining the shaft of the golf club against axial movement;
 - d. a machine shaft extending from the piston, residing slidably within the frame;
 - e. a spring residing within the machine shaft; and

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a turret in removable communication with the machine shaft via the spring, the turret engaging the head of the golf club for transferring hydraulic force, stored in the spring and created by manual actuation of the piston, to the head of the golf club in a direction to separate the golf club head from the golf club shaft.

16. (New) A method of separating a head of a golf club from a shaft, which comprises:

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- a. clamping the shaft to a frame;
 - b. rotating a threaded shaft so that a block engages a hosel of the head of the golf club;
 - c. compressing a spring so that axial force is applied to the block that engages the hosel of the head of the golf club;
 - d. heating the shaft at the point where the hosel of the head of the golf club is attached to the shaft so that a bond attaching the head to the shaft is broken; and
 - e. removing the head from the shaft of the golf club.

17. (New) An apparatus for clamping a shaft of a golf club for separating a head of the golf club from the shaft, which comprises:

- a. a frame;
- b. a plurality of slots on the surface of the frame;
- c. a 20 degree portion of each slot;
- d. a 45 degree portion of each slot;
- e. a moving box attached to the frame;

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- f. a plurality of pins extending from the surface of the moving box for engagement in the plurality of slots on the surface of the moving frame;
 - g. an eccentrically bored bushing attached to the moving box for moving the moving box within the 20 degree portion and 45 degree portion of each slot relative to the frame;
 - h. a shaft passing through the frame, the moving box, and the eccentrically bored bushing; and
 - i. a plurality of jaws attached to the end of the moving box for opening and closing for clamping and releasing the shaft of the golf club without destructive compression of the shaft.

18. (New) An apparatus for applying axial force to a head of a golf club for separating the head from a shaft, which comprises:
- a. a frame;
 - b. a threaded shaft attached to the frame;
 - c. a handle mounted on the end of the threaded shaft for rotating the threaded shaft;
 - d. a compressible spring attached to the end of the threaded shaft;
 - e. a threaded block with a dovetail groove that rides on the threaded shaft as the handle is rotated;
 - f. a fixture with a dovetail that engages the dovetail groove on the threaded block; and

- g. an end on the fixture that engages and disengages a hosel of the golf club as the handle is rotated and the threaded block moves longitudinally on the threaded shaft causing the edge to engage the hosel and compress the compressible spring and apply axial force to the hosel of the golf club.

19. ~~(New) A method of removing a head of a golf club from a shaft of the golf club, comprising:~~

- a. securing the shaft of the golf club;
- b. introducing a force on the head of the golf club, the force alone being capable of removing the head of the golf club from the shaft of the golf club but for an adhesive bond securing the head of the golf club to the shaft of the golf club; and
- c. heating the head of the golf club to a temperature which breaks the adhesive bond securing the head of the golf club to the shaft of the golf club, whereby the force removes the head of the golf club from the shaft of the golf club.

20. (New) A method of removing a head of a golf club from a shaft of the golf club, comprising:

- a. securing the shaft of the golf club;
- b. compressing a spring which introduces a force on the head of the golf club, the force alone being capable of removing the head of the golf club from the shaft of the golf club but for an adhesive bond securing the head of the golf club to the shaft of the golf club; and

- c. heating the head of the golf club to a temperature which breaks the adhesive bond securing the head of the golf club to the shaft of the golf club, whereby the force removes the head of the golf club from the shaft of the golf club.

21. (New) The method of claim 20, wherein compressing the spring is achieved by rotating a threaded shaft, the threaded shaft being connected to a threadedly movable block which engages the head of the golf club.

22. (New) An apparatus for removing a head of a golf club from a shaft of the golf club, comprising:

- a. a frame;
- b. a clamping mechanism connected to the frame; and
- c. a force mechanism connected to the frame, including:
 - i. an externally threaded shaft;
 - ii. a spring at one end of the threaded shaft, and;
 - iii. an internally threaded block movably mounted on the threaded shaft, where rotating the threaded shaft moves the block against the head of the golf club causing a resistance and further rotating the threaded shaft against the resistance compresses the spring at the end of the threaded shaft, the compressed spring applying a force on the head of the golf club capable of removing the head of the golf club from the shaft of the golf club upon breaking an adhesive bond

between the head of the golf club and the shaft of the golf club.

23. (New) The apparatus of claim 22, wherein the threaded block includes a dovetail groove and a fixture, the fixture having a dovetail that slidably engages the dovetail groove of the threaded block, the fixture also having a groove designed to engage the shaft of the golf club while abutting the head of the golf club.
24. (New) A separation apparatus for separating a club head from a club shaft to which the club head is attached comprising:
- a. a movable gripping member for engaging and holding the club shaft at a first position spaced from the club head, said gripping member being mounted on a base and cooperating with a portion of said base to define a gripping area for the club shaft.
 - b. a separation member mounted on said base for translation toward and away from said base in a direction substantially parallel to the longitudinal axis of a club shaft gripped by said gripping member and said portion of said base, said separation member including a club shaft engaging portion for engaging the club shaft in a closely interfitting manner at a second position spaced from said first position and during said translation for engaging the club head.
 - c. an actuation device for effecting said translation of said separation member away from said base to effect separation of the club head from the club shaft.

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25. (New) The invention as claimed in claim 24 wherein said actuation device is a pneumatic cylinder and piston.
26. (New) The invention as claimed in claim 25 wherein said cylinder is connected to a manually operated jack.
27. (New) The invention as claimed in claim 24 wherein said movable gripping member includes a plate connected to a moving member to move said plate toward and away from said portion of said base.
28. (New) The invention as claimed in claim 27, wherein said moving member is a threaded rod coupled to said plate, said rod engaging a threaded bore provided on a portion of said base.
29. (New) The invention as claimed in claim 27 wherein said base includes a slot extending at an angle to said base and said plate includes a pin engaged in said slot, said moving member includes a threaded rod extending parallel to said slot and engaging a threaded bore in said base.
30. (New) Apparatus for removing a head of a golf club from a shaft of the golf club, comprising:
- a. a frame;
 - b. a clamp connected to the frame for securing a golf club shaft thereto; and
 - c. a force mechanism connected to the frame, including:
 - i. a piston,
 - ii. a one piece hollow shaft having an open end and a closed end, the closed end connected to the piston,

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- iii. a spring having a first end and a second end, the spring residing within the hollow shaft with the first end abutting the closed end of the hollow shaft, and
- iv. a turret having a smaller diameter portion and a larger diameter portion, the smaller diameter portion inserted in the open end of the hollow shaft and abutting the second end of the spring, the larger diameter portion being external to the shaft and having a slot designed to engage the shaft of the golf club while abutting the head of the golf club for transferring axially directed force indirectly from said piston to said golf club head.

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31. (New) Apparatus for removing a golf club head from the golf club shaft, comprising:

- a. a frame;
- b. means for securing a golf club shaft to said frame thereto; and
- c. means, connected to said frame, head in a direction parallel with and away from said shaft, comprising:
 - i. a piston,
 - ii. a piston shaft connected to said piston,
 - iii. resilient spring means abutting an end of said piston shaft, and
 - iv. rotatable member said resilient spring, being at least partially external to the piston shaft and having at least one slot for

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engaging the golf club shaft while abutting the golf club head
for transferring axially directed force indirectly from said
piston to said golf club head.
